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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,117	09/28/2000	Hideo Miyake	1614.1082	8617

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STAAS & HALSEY LLP
700 11TH STREET, NW
SUITE 500
WASHINGTON, DC 20001

EXAMINER

KIM, HONG CHONG

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 05/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,117

Applicant(s)

MIYAKE ET AL.

Examiner

Hong C Kim

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 7. 6) ☐ Other: _____

Detailed Action

1. Claims 1-17 are presented for examination. This office action is in response to the application filed on 9/28/00.

Information Disclosure Statement

2. Receipt is acknowledged of information disclosure statements filed on 2/2/01 and 8/27/01, which the statements have been placed of record in the file. Information disclosed and listed on PTO 1449 were considered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should be more specific to differentiate the invention from similar inventions in the patent literature. It appears that lock/unlock and cache acting as a random access memory aspects of the invention should be mentioned in the title so that the title is more descriptive.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by MacDonald US Patent 5,913,224.

As to claim 1, MacDonald discloses the invention as claimed. MacDonald discloses a method of controlling a cache memory (Fig. 2 Ref. 200) connected to a main memory (Fig. 2 Ref. 300) and divided into a plurality of cache blocks (Fig. 2 Ref. 220), which is executed by a computer (Fig. 2 Ref. 100) that accesses the main memory through the cache memory (Fig. 2), comprising the steps of: supplying a lock/unlock signal (Fig. 2 Ref. 230 and col. 7 line 5 thru col. 8 line 20) and performing either reading or writing (col. 7 lines 27-29) of the main memory .

As to claim 2, MacDonald discloses the invention as claimed above. MacDonald further discloses at least on of flags corresponding to the cache blocks (Fig. 2 Ref. 230).

As to claim 3, MacDonald discloses the invention as claimed above. MacDonald further discloses unlock instruction (Fig. 2 Ref. 230 and col. 7 lines 56-58).

As to claim 4, MacDonald discloses the invention as claimed. MacDonald discloses a computer including a main memory and a cache memory (Fig. 2), the cache memory being connected to the main memory and divided into a plurality of cache blocks (Fig. 2) comprising: a block setting unit which supplies a lock/unlock signal (Fig. 2 Ref. 230 and col. 7 line 5 thru col. 8 line 20) and reading/ writing unit (col. 7 lines 27-29).

As to claim 5, MacDonald discloses the invention as claimed above. MacDonald further discloses at least on of flags corresponding to the cache blocks (Fig. 2 Ref. 230).

As to claim 6, MacDonald discloses the invention as claimed above. MacDonald further discloses unlock instruction (Fig. 2 Ref. 202 and col. 7 lines 56-58).

As to claim 7, MacDonald discloses the invention as claimed. MacDonald discloses a method of controlling a cache memory (Fig. 2 Ref. 200) connected to a main memory (Fig. 2 Ref.

300) and divided into a plurality of cache blocks (Fig. 2 Ref. 220), which is executed by a computer (Fig. 2 Ref. 100) that accesses the main memory through the cache memory (Fig. 2), comprising the steps of: determining that an address designated by the instruction matches with an address of at least one of the cache blocks of the cache memory (read hit and read miss reads on this limitation, col. 7 lines 24-44) and supplying a lock/unlock signal (Fig. 2 Ref. 230 and col. 7 line 5 thru col. 8 line 20).

As to claim 8, MacDonald discloses the invention as claimed. MacDonald discloses a computer including a main memory and a cache memory (Fig. 2), the cache memory being connected to the main memory and divided into a plurality of cache blocks (Fig. 2) comprising: a comparator which determines that an address designated by an instruction matches with an address of at least one of the cache block (read hit and read miss reads on this limitation, col. 7 lines 24-44) and a lock/unlock control unit (Fig. 2 Ref. 230 and col. 7 line 5 thru col. 8 line 20) and reading/ writing unit (col. 7 lines 27-29).

As to claim 9, MacDonald discloses the invention as claimed above. MacDonald further discloses a load control unit (Fig. 2 Ref. 202).

As to claim 10, MacDonald discloses the invention as claimed above. MacDonald further discloses a store control unit (Fig. 2 Ref. 202).

As to claim 11, MacDonald discloses the invention as claimed above. MacDonald further discloses a flash control unit (Fig. 2 Ref. 202 and col. 7 lines 56-58).

As to claim 12, MacDonald discloses the invention as claimed above. MacDonald further discloses an invalidate control unit (Fig. 2 Ref. 202 and col. 7 lines 56-58).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Biggs et al. (Biggs) US Patent 5,410,669.

As to claim 13, Biggs discloses the invention as claimed. Biggs discloses a method of controlling a cache memory is connected to a main memory with a first address space and capable of acting as a random access memory, which is executed by a computer that accesses that main memory through that cache memory (Fig. 3 and col. 4 line 46 thru col 5 line 25) comprising the steps of: determining whether that cache memory is acting as the random access memory (col. 4 line 54) and assigning a second address space which separate from the first address space of the main memory for the cache memory when the cache memory is acting as the random access

memory (col. 4 line 46 thru col 5 line 25).

As to claim 14, Biggs discloses the invention as claimed above. Biggs further discloses a bus control unit (Fig. 1 Ref. 20) .

As to claim 15, Biggs discloses the invention as claimed. Biggs discloses a computer including a main memory and a cache memory (Fig. 3), the main memory having a first address space and the cache memory being capable of acting as a random access memory, which is executed by a computer that accesses that main memory through that cache memory (Fig. 3 and col. 4 line 46 thru col 5 line 25) comprising the steps of: determination unit which determining whether that cache memory is acting as the random access memory (col. 4 line 46 thru col 5 line 25) and assignment unit (col. 4 line 46 thru col 5 line 25).

As to claim 16, Biggs discloses the invention as claimed above. Biggs further discloses a selection unit (Fig. 3 and col. 4 line 46 thru col 5 line 25)

As to claim 17, Biggs discloses the invention as claimed above. Biggs further discloses a bus control unit (Fig. 1 Ref. 20), a peripheral system (Fig. 1), and an access control unit (Fig. 3 and col. 4 line 46 thru col 5 line 25)

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.
10. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).
11. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. § 1.111(c).
12. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.
13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hong Kim whose telephone number is (703) 305-3835. The Examiner can normally be reached on the weekdays from 8:30 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Do Yoo, can be reached on (703) 308-4908.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

14. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to TC-2100:

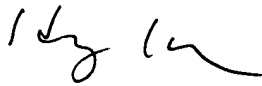
After-final (703) 746-7238

Official (703) 746-7239 (for formal communications intended for

entry)

Non-Official/Draft (703) 746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


HK
Primary Patent Examiner
May 4, 2002